MONTHLY WEATHER REVIEW,

AUGUST, 1881.

(General Weather Service of the United States.)

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

In preparing this REVIEW the following data, received up to September 20th, have been used, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at 133 Signal Service stations and 15 Canadian stations, as telegraphed to this office; 185 monthly journals and 180 monthly means from the former, and 15 monthly means from the latter; 201 monthly registers from Voluntary Observers; 50 monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; monthly reports from the local Weather Services of Iowa, Nebraska and Missouri, and of the Central Pacific Railway Co.; reliable newspaper extracts; special reports.

BAROMETRIC PRESSURE.

The distribution of mean atmospheric pressure over the United States and Canada for the month of August, 1881, is shown by isobaric lines (in black) upon chart No. II. The areas of lowest barometric mean cover the Upper Missouri valley, extreme Northwest, Texas, and California. Within these districts the pressure ranges from 29.72 to 29.94. East of the 95th meridian the mean nowhere falls below 29.93, which reading occurred at only one station, Charlottetown, P. E. I. The area of highest mean pressure (30.03 to 30.06) prevails over the lower peninsula of Michigan and thence southeastward to the Atlantic. On the Pacific coast the barometer ranges from 29.83 at Visalia to 30.04 at Roseburg. The following high readings are reported from elevated stations where reduction to sea level is uncertain: Pike's Peak, 30.26; La Mesilla, N. M, 30.25; Fort Davis, Tex., 30.19. Compared with the preceding month the pressure east of the 100th meridian, except along the immediate Gulf coast, is higher, the excess ranging from 0.01 to 0.12 inch. On the Gulf and Pacific coasts and over the Rocky Mountain and Plateau Districts there is a deficiency of from 0.02 to 0.11, inch the greatest change occurring over the Florida peninsula.

Departures from the Normal Values for the Month.—Compared with the means for previous years the mean pressure of the present month is from 0.01 to 0.07 inch below the average in Tennessee, the Gulf and South Atlantic states. Throughout the Missouri valley there is a deficiency of from 0.01 to 0.04 inch. Westward from Denver and Cheyenne along the 40th parallel to California, the deficiency is 0.02 inch. Another area of deficiency, and where the departure ranges from 0.01 to 0.03 inch, prevails along the New England coast. Elsewhere the comparison displays a normal condition, or an excess of 0.01 to 0.08 inch, the greatest variation being found in the Middle Pacific coast and Upper Lake regions. Stations reporting a normal condition are as follows: Boston, Corsicana, Dodge City, Des Moines, Indianapolis, Knoxville, New Orleans, Olympia, Philadelphia, Springfield, Ill., and St. Paul.